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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,122

08/30/2006

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EXAMINER

MC GINTY, DOUGLAS J

ART UNIT

PAPER NUMBER

1796

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,122	<b>Applicant(s)</b> NAGAO ET AL.	
	<b>Examiner</b> DOUGLAS MC GINTY	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2008 and 12 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23 and 25-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11-12-08</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Prosecution***

All of the obviousness-type double patenting rejections are maintained.

The rejection of claims as anticipated or obvious over Morita (WO 03/027368) is maintained.

The rejection of claim 7 under 35 U.S.C. 103(a) over Morita (WO 03/027368) is withdrawn.

The rejection of claims under 35 U.S.C. 103(a) over Morita (WO 03/027368) in view of Patel (US 6,528,572) is maintained.

The applicable statutes, decisions, rules, and policies have been set forth in the previous Office Action and are not repeated herein.

### ***Double Patenting***

Claims 23 and 25-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 7,390,593.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that patent involve vapor grown fibers with an aspect ratio of 2-500 nm. Claim 12 in that patent further includes a resin.

Claims 23 and 25-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 7,150,840.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that patent involve carbon fibers. Claim 9 in that patent involves vapor grown carbon fibers. Claim 12 in that patent has an aspect ratio of 10-15,000. Claim 19 in that patent includes a resin.

Claims 23 and 25-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 7,122,132.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that patent involve vapor grown carbon fibers. Claim 2 in that patent has an aspect ratio of 10-2,000. Claim 11 in that patent includes a resin.

Claims 23 and 25-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,844,061.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that patent involve carbon fibers with an aspect ratio of 10-15,000. Claim 10 in that patent includes a resin.

Claims 23 and 25-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,974,627.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that patent involve carbon fibers with an aspect ratio of 10-15,000.

Claims 23 and 25-32 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of copending Application No. 11/662,645.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that other application involve conductive resin composition with carbon fibers. The aspect ratio is 50-1000. Claim 2 in that other application has a specific surface area of 3-50 m<sup>2</sup>/g.

Claims 23 and 25-32 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 10/592,121.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that other application involve a conductive resin composition with vapor-grown carbon fibers. The aspect ratio is 40-1000. Claim 7 in that other application has a specific surface area of 4-30 m<sup>2</sup>/g.

Claims 23 and 25-32 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/570,140.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that other application involve a conductive resin

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composition with vapor-grown carbon fibers. Claim 4 in that other application has an aspect ratio is 40-1000 and a specific surface area of 4-30 m<sup>2</sup>/g.

Claims 23 and 25-32 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 11/661,130.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that other application involve a conductive resin composition with vapor-grown carbon fibers. Claim 2 in that other application has an aspect ratio is 10-1000. Claim 12 in that other application has a twin-screw extruder.

Claims 23 and 25-32 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 10/540,560.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of that other application involve a composition with vapor-grown carbon fibers having an aspect ratio of 10-15,000. Claim 15 in that other application has a resin.

The above rejections over pending applications are provisional obviousness-type double patenting rejections because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC §§ 102 and 103***

Claims 23, 25, 26, 31, and 32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Morita (WO 03/027368).

Morita teaches conductive filler for a conductive resin containing vapor grown carbon fiber having an aspect ratio of 10-15,000 and a fiber diameter of 1-500 nm diameter (Abstract). The reference exemplifies filler in the amount of 15 wt% (17:35-18:12).<sup>1</sup> Various materials such a sliding member can be produced (18:14-26).

The reference does not appear to specifically teach the specific surface areas, peak intensity ratios, breakage rates, bulk densities, anisotropic ratios, heat deflection temperature, thermal conductivity, flexural modulus, etc., presently claimed. Nevertheless, the reference teaches carbon fibers made by the vapor growth process. Compositions with the same materials would have the same inherent properties, so that the burden fairly shifts to the applicant to show otherwise. MPEP 2112.01.

Accordingly, Morita is found to anticipate the claimed invention. The claims also are found to have been obvious to one of ordinary skill in the art over the teachings of Morita because the reference teaches vapor grown carbon fibers as conductive filler in resin compositions.

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<sup>1</sup> The designation "17:35" refers to p. 17, line 35.

Claims 23 and 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita as applied to claims 23, 25, 26, 31, and 32 above, and further in view of Patel (US 6,528,572).<sup>2</sup>

Morita does not appear to specifically teach melt-mixing by means of a twin-screw extruder or pressure kneader.

Patel teaches mixing the carbon fibers and resin by various means, including an extruder or any other apparatus suitable for yielding a substantially uniform mixture (7:16-34).<sup>3</sup> Example 1 has a twin-screw extruder (8:55).

It would have been obvious to use the various mixing means taught by Patel to make the conductive resin taught by Morita because both references teach making conductive resins with carbon fibers. One skilled in the art only had to look to the closely related teachings of Patel to carry out the mixing required by Morita. “The combination of familiar [components] according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Intern. Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007). Obviousness only requires a reasonable expectation of success. *In re O’Farrell*, 853 F.2d 894, 904 (Fed. Cir. 1988). See also, MPEP 2143.02.

### ***Response to Arguments***

The Applicants urge that the double patenting rejections should be withdrawn because none of the claims in the patents and other applications are directed to sliding members. This urging is not persuasive. The present claims and the claims in the

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<sup>2</sup> This rejection is made over the combined teachings of Morita and Patel.

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patents and other applications involve compositions and methods with compositions.

The description as a “sliding member” is considered to be a statement of intended use only which does not further limit the scope of the presently claimed invention. MPEP 2111.02, II.

The Applicants assert that Morita (WO 03/027368) does not disclose or render obvious the present claims because the reference does not teach the following claimed features -- vapor grown carbon fibers, a heat deflection temperature of 160°C or more, and kneading without applying strong shear force to suppress fiber breakage. These assertions are not persuasive. As noted in the previous Office Action and repeated above, Morita teaches conductive filler for a conductive resin containing vapor grown carbon fiber with aspect ratios, diameters, and amounts overlapping those presently claimed which can be used for sliding members. The teachings of ranges which overlap the claimed ranges are anticipatory if taught with “sufficient specificity”. MPEP 2131.03, II. Overlapping ranges also may be obvious to one of ordinary skill in the art. MPEP 2144.05, I. The limitations as to heat deflection and the suppression of fiber breakage would have been inherent or prima facie obvious in view of the composition and method taught in Morita, since the structure and method steps appear to be the same. MPEP 2112 et seq. The reference also teaches overlapping aspect ratios and diameters, so the breakage rate in the final product would have been low as well.

The Applicants further argue that the amorphous carbon and granular carbon in Morita is generally inferior to the claimed composition with a high aspect ratio. This

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<sup>3</sup> The designation “7:16-34” refers to col. 7, lines 16-34.

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argument is not persuasive. The reference also teaches a vapor grown fiber with overlapping aspect ratios. Also, arguments of counsel do not take the place of persuasive evidence in the record. MPEP 2145, I.

The Applicants insist that Patel (US 6,528,572) does not cure the deficiencies of Morita because Patel does not describe or suggest a sliding member. However, one cannot show nonobviousness by attacking the references individually when the rejection is based on a combination of references. MPEP 2145, IV. The Applicants further insist that Patel does not teach the kneading method presently claimed, but as discussed above, the claimed invention would have been obvious over the combined teachings of the reference as a whole.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOUGLAS MC GINTY whose telephone number is (571)272-1029. The examiner can normally be reached on M-F, 830-500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DOUGLAS MC GINTY/  
Primary Examiner, Art Unit 1796